IN THE CLAIMS

1. (Canceled without prejudice or disclaimer)

2. (Previously Presented) The system according to claim 3, wherein the intermediate portion of the diaphragm comprises a flexible material relative to the central portion.

3. (Previously Presented) A system for controlling evaporative emissions of a volatile fuel, the system comprising:

a fuel vapor collection canister;

an isolation valve including:

a housing defining a chamber, the housing including an interior partition, a first port, and a second port, the interior partition defining an aperture and separating the housing into first and second sections, and the first port being in fuel vapor communication with the fuel vapor collection canister;

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a diaphragm dividing the second section of the housing into first and second segments, the diaphragm including a central portion, a peripheral portion being fixed with respect to the housing, and an intermediate portion extending between the central and peripheral portions, the diaphragm being movable with respect to the housing between a first configuration and a second configuration, the first configuration occluding the aperture so as to substantially prevent fuel vapor flow between the first and second ports and dividing the chamber into three sub-chambers including:

a first sub-chamber extending from the first port to the aperture and being defined by the interior partition, the central portion of the diaphragm, and the first section of the housing;

a second sub-chamber extending from the aperture to the second port and being defined by the interior partition, the intermediate portion of the diaphragm, and the second segment of the second section of the housing; and

a third sub-chamber being defined by the first segment of the second section of the housing and the central and intermediate portions of the diaphragm; and

the second configuration dividing the chamber into two sub-chambers and permitting generally unrestricted fuel vapor flow between the first and second ports; and

a coil spring being enclosed by the third sub-chamber and biasing the diaphragm toward the first configuration, the coil spring including a first end engaging the housing and a second end engaging the central portion of the diaphragm; and

a fuel tank being in fuel vapor communication with the second port of the isolation valve.

4. (Canceled without prejudice or disclaimer)

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5. (Previously Presented) The fuel tank isolation valve according to claim 17, wherein the diaphragm is movable to a second configuration dividing the chamber into two sub-chambers and permitting generally unrestricted fluid flow between the first and second ports.

6. (Previously Presented) The fuel tank isolation valve according to claim 17, wherein the resilient element comprises a first end engaging the housing and a second end engaging the diaphragm.

7. (Original) The fuel tank isolation valve according to claim 6, wherein the diaphragm comprises a central portion, a peripheral portion, and an intermediate portion extending between the central and peripheral portions, the central portion engaging the second end of the resilient element, the peripheral portion being fixed with respect to the housing, and the intermediate portion including a flexible material relative to the central portion.

8. (Original) The fuel tank isolation valve according to claim 7, wherein the central portion of the diaphragm comprises a rigid plate.

9. (Original) The fuel tank isolation valve according to claim 7, wherein the intermediate portion comprises a convolute.

10. (Original) The fuel tank isolation valve according to claim 7, wherein the diaphragm comprises a homogenous material.

11. (Original) The fuel tank isolation valve according to claim 10, wherein the homogenous material comprises a hydrocarbon impermeable material.

12. (Original) The fuel tank isolation valve according to claim 10, wherein the central portion comprises a thicker cross-section relative to the intermediate portion.

13. (Previously Presented) The fuel tank isolation valve according to claim 17, wherein the resilient element comprises a coil spring.

14. (Canceled without prejudice or disclaimer)

15. (Previously Presented) The fuel tank isolation valve according to claim 17, wherein the diaphragm occludes the aperture at the first configuration.

16. (Canceled without prejudice or disclaimer)

17. (Previously Presented) A fuel tank isolation valve comprising:

a housing defining a chamber, the housing including a first port adapted to be connected in fluid communication with a fuel vapor collection canister, a second port adapted to be connected in fluid communication with a fuel tank, and an interior partition defining an aperture, the interior partition separating the housing into first and second sections;

a diaphragm movable with respect to the housing, the diaphragm dividing the second section of the housing into first and second segments; and

a resilient element biasing the diaphragm toward a first configuration dividing the chamber into three sub-chambers and substantially preventing fluid flow between the first and second ports;

wherein the chamber at the first configuration comprises a first sub-chamber, a second sub-chamber, and a third sub-chamber, the first sub-chamber extending from the first port to the aperture and being defined by the interior partition, the diaphragm, and the first section of the housing, the second sub-chamber extending from the aperture to the second port and being

defined by the interior partition, the diaphragm, and the second segment of the second section of the housing, and the third sub chamber enclosing the resilient element and being defined by the diaphragm and the first segment of the second section of the housing.

18. (Original) The valve according to claim 17, wherein the interior partition comprises a check valve providing unidirectional fluid communication between the first and second sub-chambers.

19. (Previously Presented) A fuel tank isolation valve comprising:

a housing defining a chamber, the housing including a first port adapted to be connected in fluid communication with a fuel vapor collection canister, a second port adapted to be connected in fluid communication with a fuel tank, and an interior partition defining an aperture, the interior partition separating the housing in to first and second sections;

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a diaphragm movable with respect to the housing, the diaphragm dividing the second section of the housing into first and second segments; and

a resilient element biasing the diaphragm toward a first configuration dividing the chamber into three sub-chambers and substantially preventing fluid flow between the first and second ports;

wherein the chamber at the first configuration comprises a first sub-chamber, a second sub-chamber, and a third sub-chamber, the first sub-chamber extending from the first port to the aperture and being defined by the interior partition, the diaphragm, and the first section of the housing, the second sub-chamber extending from the aperture to the second port and being defined by the interior partition, the diaphragm, and the second segment of the second section of the housing, the third sub chamber enclosing the resilient element and being defined by the diaphragm and the first segment of the second section of the housing, and the first segment of the second section of the housing including a flow restrictor regulating fluid communication between the third sub-chamber and ambient conditions exterior to the housing.

20. (Original) The valve according to claim 19, wherein the flow restrictor comprises an orifice.

21. (Original) The valve according to claim 19, wherein the flow restrictor comprises a filter.

22. (Currently Amended) A method of controlling fuel vapor flow between an evaporative emission space of a fuel tank and a fuel vapor collection canister, the method comprising:

~~providing a fuel tank isolation valve including:~~

a housing defining a chamber, the housing including a first port being adapted for fuel vapor communication with the evaporative emission space of the fuel tank and including a second port being adapted for fuel vapor communication with the fuel vapor collection canister;

a diaphragm including a central portion, a peripheral portion being fixed with respect to the housing, and an intermediate portion extending between the central and peripheral portions, the diaphragm movable with respect to the housing between a first configuration and a second configuration, the first configuration dividing the chamber into three sub-chambers and substantially preventing fluid flow between the first and second ports, and the second configuration dividing the chamber into two sub-chambers and permitting generally unrestricted fluid flow between the first and second ports; and

a resilient element biasing the diaphragm toward the first configuration;

moving the diaphragm to the first configuration in response to a second pressure level at the second port acting on the central portion of the diaphragm, the second pressure level being below atmospheric pressure; and

moving the diaphragm to the second configuration in response to a first pressure level at the first port acting on the intermediate portion of the diaphragm, the first pressure level being above atmospheric pressure.

23. (Original) The method according to claim 22, further comprising:

equalizing pressure at the first and second ports in response to a third pressure level at the first port, the third pressure level being below atmospheric pressure.

24. (Original) The method according to claim 23, wherein the equalizing comprises providing a check valve.

25. (Previously Presented) A method of controlling fuel vapor flow between an evaporative emission space of a fuel tank and a fuel vapor collection canister, the method comprising:

providing a fuel tank isolation valve including:

a housing defining a chamber, the housing including a first port being adapted for fuel vapor communication with the evaporative emission space of the fuel tank and including a second port being adapted for fuel vapor communication with the fuel vapor collection canister;

a diaphragm movable with respect to the housing between a first configuration and a second configuration, the first configuration dividing the chamber into three sub-chambers and substantially preventing fluid flow between the first and second ports, and the second configuration dividing the chamber into two sub-chambers and permitting generally unrestricted fluid flow between the first and second ports; and

a resilient element biasing the diaphragm toward the first configuration;

moving the diaphragm to the first configuration in response to a second pressure level at the second port, the second pressure level being below atmospheric pressure;

moving the diaphragm to the second configuration in response to a first pressure level at the first port, the first pressure level being above atmospheric pressure; and

equalizing pressure at the first and second ports in response to a third pressure level at the first port, the third pressure level being below atmospheric pressure

wherein the first pressure level is at least one inch of water above atmospheric pressure, and the third pressure level is at least six inches of water below atmospheric pressure.

26. (Currently Amended) A method of controlling fuel vapor flow between an evaporative emission space of a fuel tank and a fuel vapor collection canister, the method comprising:

providing a fuel tank isolation valve including:

a housing defining a chamber, the housing including a first port being adapted for fuel vapor communication with the evaporative emission space of the fuel tank and including a second port being adapted for fuel vapor communication with the fuel vapor collection canister;

a diaphragm including a central portion, a peripheral portion being fixed with respect to the housing, and an intermediate portion extending between the central and peripheral portions, the diaphragm movable with respect to the

housing between a first configuration and a second configuration, the first configuration dividing the chamber into three sub-chambers and substantially preventing fluid flow between the first and second ports, and the second configuration dividing the chamber into two sub-chambers and permitting generally unrestricted fluid flow between the first and second ports; and

a resilient element biasing the diaphragm toward the first configuration;

moving the diaphragm to the first configuration in response to a second pressure level at the second port acting on the central portion of the diaphragm, the second pressure level being below atmospheric pressure;

moving the diaphragm to the second configuration in response to a first pressure level at the first port acting on the intermediate portion of the diaphragm, the first pressure level being above atmospheric pressure; and

damping the moving of the diaphragm, the damping being in response to rapid increases in the first pressure level.

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27. (Original) The method according to claim 26, wherein the diaphragm at the first configuration divides the chamber into a damping sub-chamber and a fuel vapor flow sub-chamber, and the damping comprises providing a flow restrictor regulating fluid communication between the damping sub-chamber and ambient conditions exterior to the housing.

Some damping inherent due to internal friction of diaphragm & spring, a small diameter long pipe 6 will damp